

## Congressional Visits Day



*Houston section delegates with congress – see page 4 for details.*

## Becoming an AIAA member

Are you interested in becoming a member of the AIAA or renewing your membership? You can fill out a membership application online by going to the AIAA membership website at [www.aiaa.org/information](http://www.aiaa.org/information).

## May 15 Input Deadline for the Next Edition of *Horizons*

Contributions can be submitted by email to Nicole Smith at [chairAIAA@aiaa-houston.org](mailto:chairAIAA@aiaa-houston.org). (remove AIAA from e-mail address)

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## Chair's Corner

The American Institute of Aeronautics and Astronautics (AIAA), Houston Section, is seeking qualified candidates for election to fill expiring Section Officer and Councilor positions. Available officer positions for the 2003-2004 term include:

- \* Chairman - Elect
- \* Vice Chairman - Operations
- \* Vice Chairman - Technical
- \* Treasurer
- \* Secretary.

In addition five of ten Councilors will need to be filled. Complete position descriptions can be found at <http://www.jsc.nasa.gov/aiaa/pd.html>, and as defined in the Section's Bylaws at <http://www.jsc.nasa.gov/aiaa/bylaws.html>. Officers serve a one-year term and elected Councils serve a two-year term.

The 2003-2004 term runs from 07/01/03 through 06/30/04. All nominees must be members of the Houston Section and in good standing with AIAA. As a volunteer organization, the Section is very much dependent upon the willingness of members to give of their time and energy, and in agreeing to serve in leadership roles. All interested parties should contact Nicole Smith, Nominating Committee Chair, at 281-244-7145 or [ChairAIAA@aiaa-houston.org](mailto:ChairAIAA@aiaa-houston.org) (Remove AIAA from email), by Friday, April 25, 2003 at 5:00 pm. After this date, additional nominations may be made by petition through May 5, 2003. Contact Pdraig Moloney, Section Secretary, at 281-244-5917 or [Pdraig.G.MoloneyAIAA@nasa.gov](mailto:Pdraig.G.MoloneyAIAA@nasa.gov) (Remove AIAA from email) for petitioning details. Thanks for your support! Learn more about this event and the AIAA Houston Section at <http://www.jsc.nasa.gov/aiaa>.  
Best regards,

L. Nicole Smith  
Chairperson, AIAA Houston Section

## Student Paper Conference a Success

*By Michael Oelke, Chair Elect*

The AIAA Southwest Student Paper Conference was held April 3 – 5th at the University of Houston Main Campus and was a big success! 45 students from 5 universities (Rice, the University of Houston, Texas A&M university, the University of Texas at Arlington, and the University of New Mexico) attended and competed for scholarship money and a chance to advance to the national competition.

The conference started on Thursday night with an opening reception 'From Gliders to Spaceports: Celebrating a Century of Flight'. This was an event hosted by the Sasakawa International Center for Space Architecture (SICSA) and the AIAA Evolution of Flight fund. The evening included a pasta buffet, an address and a tour of the SICSA facilities, and a balsa glider competition during which aero and architecture students alike competed.



Director Larry Bell provided a tour of the SICSA facilities for the SPC attendees

Friday April 4<sup>th</sup> was the primary competition day featuring all of the undergraduate (5) and graduate (11) papers. Dr. Charles Justiz, an instructor pilot from the JSC/CA2 group at Ellington Field provided an outstanding lunchtime presentation entitled 'Risk Mitigation in Test Flight'. The day concluded with a Young Professional (YP) Forum headed by Houston Section Chair Nicole Smith. At the Forum soon-to-be graduates received tips and advice on job searches and the transition from school life to professional life.

The last papers were presented Saturday morning. These papers included five history papers and three design team presentations. Awards were presented at lunch, during which Dr. Alex Ignatiev of the Texas Center for Superconductivity and Advanced Materials (TcSAM) provided a fascinating presentation on materials processing in LEO and on the lunar surface. The conference concluded with a tour of the TcSAM facilities.

As with so many other AIAA events, this one would not have been possible without the support of many volunteers and corporate sponsors. Thank you to all of the judges, written and oral, who participated in the event. Also, thanks to all of the Texas A&M students and University of Houston Students who volunteered to help with the planning and execution of the event. The sponsors for the conference were: AIAA Foundation and Evolution of Flight fund, Boeing, Lockheed Martin, Cimarron, SAIC, Oceaneering, Honeywell, Hernandez Engineering, Muniz Engineering, Raytheon, Dynacs, the Sasakawa Interna-

tional Center for Space Architecture, and the University of Houston.

2003 AIAA Region IV Student Paper Conference Winners

<b>Graduate Paper Title</b>	
1st Place	Rafael Caicedo, Texas A&M University <i>Preliminary Results of Vehicle Formation Control Using Dynamic Inversion</i>
2nd Place	Matt Mulholland, University of New Mexico <i>The Study of Void Growth and Interaction in a Superplastic Material</i>
3rd Place	Rajagopal Pachalla, Texas A&M University <i>Oscillatory Forced Convection Cooled Compact SMA actuator</i>
<b>Undergraduate Paper Title</b>	
1st Place	Justin Hargrove, Texas A&M University <i>Supercavitation and Aerospace Technology</i>
2nd Place	Robert Effinger IV, Texas A&M University <i>Characterization of a Vision Based Stereo Navigation System</i>
3rd Place	Paul Gesting, Texas A&M University <i>Intelligent Terrain Avoidance Agent</i>
<b>History Paper Title</b>	
1st Place	Chris Haag, Texas A&M University <i>From Dream to Reality: The Work of Werner von Braun</i>
2nd Place	James MacCornack, University of New Mexico <i>Apollo One: A Case Study</i>
3rd Place	Michelle Craig, University of Texas Arlington <i>X-Planes: Past and Present</i>
<b>Design Team Presentation</b>	
1st Place	Darrell Crowe, Paul Gesting, David Moore, Texas A&M University <i>The Flaming Moe: Mid-size Turbojet Design</i>

## Houston Section Hits the Hill

By Nicole Smith, Chair

On April 7-8, 2003, AIAA hosted its annual Congressional Visits Day in Washington, D.C. Four members from the Houston Section joined forces with two

members from the North Texas Section to meet with their local congressional members and discuss pressing aerospace issues.

Houston delegates Sophia Bright, Bill Atwell, Wayne Rast, and Nicole Smith met with Representatives Lampson and Bell and also met with staff from the offices of Senators Hutchison and Cornyn, as well as staff from the offices of Representatives Hall, Jackson-Lee, Smith, and Burgess.

AIAA Nationals publishes an annual "Top Issues" list that is included in informational packets that are distributed to the congressional members. In addition, the Houston Section elaborated on five issues that are closer to home. These five issues were: Columbia and the Return to Flight, International Space Station, Human Spaceflight, Workforce Issues, and the National Aerospace Research and Technology Plan. Members were extremely receptive to our Issues and we stressed that they can always contact the Houston Section for more aerospace industry grassroots information.

For more information on the Houston Section's public policy activities, please contact Chad Brinkley, Houston Section Public Policy Chair, at [cbrinkleyAIAA@cimarroninc.com](mailto:cbrinkleyAIAA@cimarroninc.com), or Nicole Smith at [ChairAIAA@aiaa-houston.org](mailto:ChairAIAA@aiaa-houston.org). (Remove AIAA from email)

## 40th Anniversary for Houston Section?

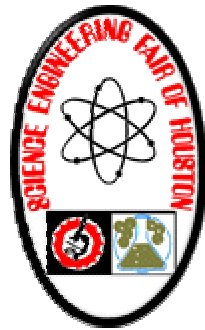
By Mike Oelke, Chair-Elect

We need your help! We recently realized that this year marks the Fortieth Anniversary for the Houston Section of AIAA. A few of our founding members pointed out recently that an existing section of the American Rocket Society (ARS) was already present here in Houston in 1962. As a few of you may know, on February 1, 1963 the ARS and the Institute of Aerospace Sciences merged to become the American Institute of Aeronautics and Astronautics (AIAA). By virtue of the fact that the ARS section already existed, we automatically had an AIAA section starting in 1963. It was an exciting time...the Manned Spaceflight Center was just getting started and President John F. Kennedy's speech for going to the Moon was less than a year old. We'd like to hear from all of the people who over the years have been AIAA members, especially those who were officers, councilors, or committee chair in those early years. With your help we would like to contact as many 'alumni' as possible, wherever they may be today.

Please contact Norm Chaffee (norman.h.chaffee1AIAA@jsc.nasa.gov (remove AIAA from email) or (281) 483-3777) or Mike Oelke (moelkeAIAA@oss.oceaneering.com (Remove AIAA from email) or (281) 228-5410). We would like to put together a Fortieth Anniversary Reunion in the coming months!

## AIAA Chooses Science Fair Winners !

by Joy Conrad King, Pre-College Outreach Chair



The 44<sup>th</sup> annual Science and Engineering Fair of Houston was held March 27-29 at the Reliant Center. This fair is one of the largest of its kind and draws regional winners from the 16 county area. Each year there are approximately 1200 entries spanning grades 7-12. The fair also has by far the most special awarding agencies that give out their own award at the fair.

Once again the AIAA Houston section was one of those special awarding agencies and gave out prizes to the best aerospace project in the Junior, Ninth Grade, and Senior divisions. The award this year was a book reviewing the last 100 years of flight signed by NASA astronaut Jim Voss. The winners also received an AIAA t-shirt and some posters and balsa wood gliders.

This year the winners are:

Junior Division	Hayden Djakic International Space Travel 7 <sup>th</sup> Grade John Cooper School, Woodlands
Ninth Grade Division	Nicholas Olheiser How High Can You Fly? 9th Grade Hightower High School Missouri City
Senior Division	Megan Hanson "Fin"tastic Rockets 12th Grade Hidden Dell Academy Houston

Congratulations to all the students who made it to this level and especially to the AIAA winners. It's great to see such an enthusiastic bunch of possible future engineers and scientists.

## Spy Satellites in the Early Cold War

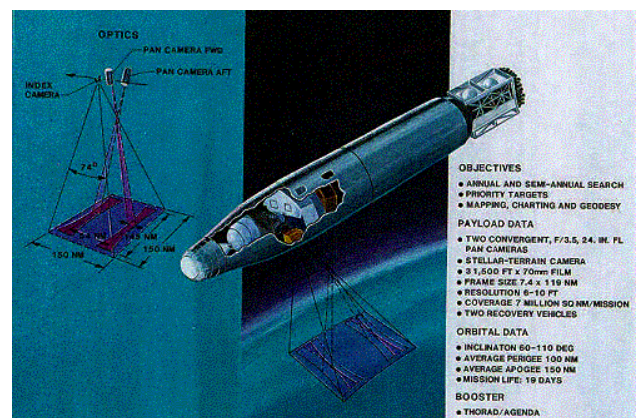
Tuesday May 13th Dinner Meeting at Gilruth Center

The Houston Section is proud to host author, historian, and space policy analyst Dr. Dwayne A. Day for our May 2003 dinner meeting at Gilruth Center. His primary research has been in the history of reconnaissance satellites and their effect on international policy. He has also served as Guggenheim and Verville Fellow at the Smithsonian National Air and Space Museum, written a book about scientific advice to the Air Force, and is currently serving on the staff of the Columbia Accident Investigation Board.

Dr. Day's topic for the dinner meeting will be on the development of the CORONA satellite program, the first operational spy satellite. What follows is an abstract for his presentation:

"American intelligence on the Soviet Union during the 1950s was abysmal, prompting the creation of the U-2 spy plane. Although it was a wonder of engineering, the U-2 was what the CIA called a "melting asset," soon to be rendered vulnerable to Soviet defenses. This prompted the creation of the CORONA satellite program in 1958. Although intended as an interim system until better satellites became available, the CORONA program actually lasted 14 years and achieved notable successes after a difficult and problem-plagued development program."

The usual schedule of 5:30 social, 6:00 dinner, and 7 PM presentation will apply. Watch for the dinner fliers in early May!



Summary of the Corona system, courtesy of National Reconnaissance Office

# Texas Robots Compete in Local Competition

By Joy and Steve King

The FIRST (For Inspiration and Recognition of Science and Technology) Robotics Competition challenges teams of high school students and their mentors to solve a common problem in a six-week time-frame using primarily a standard "kit of parts" and a common set of rules. Teams build robots from the parts and enter them in a series of competitions designed by inventor/engineers Dean Kamen and Woodie Flowers. The Competition has grown to more than 800 teams competing in 23 Regional Events, and The Championship Event held at Reliant Park in Houston where more than 20,000 students participate. The FIRST Lone Star Regional Robotics Competition was held April 3 - 5 in the Reliant Arena, and the FIRST Champion Robotics Competition was held April 10 - 12 in the Reliant Stadium and Dome.

This year's game was called Stack Attack. The students had 2 minutes to command their robot to move storage containers from the top of a ramp into their scoring area. Extra points were then obtained by stacking the containers or ending the match completely on top the ramp. Also new this year was an autonomous period where the robot had to initially rely in its own internal programming to get the containers.

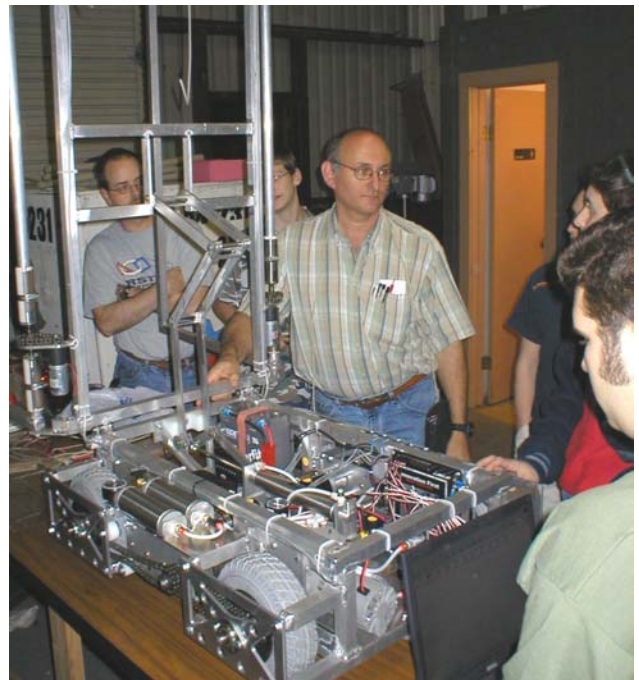
Three area robots took part in the Lone Star Competition. Team 118, the Robonauts, from Clear Creek, Clear Brook, and Clear Lake High Schools finished 10th in the qualifying rounds; Team 231, High Voltage, from Pasadena, Sam Rayburn, South Houston, and Dobie High Schools finished 3rd; and Team 446, the Robodogs, from La Porte High School finished 6th. All three team then did well in the finals.

Teams 118 and 231 also competed in the Championship competition the next weekend. This was the first time the Championship has been in Houston, and it was the world's largest robotics competition with 300 robots and 4 simultaneous games. It was also the site of the FIRST Lego League invitational.



The Robonauts, Team 118

The students on all the teams that competed deserve a big hand. They put in many hours and found out first hand what it takes to develop an engineering project then follow it through all the way to completion. They had a little fun on the way too! Learn more about the FIRST Robotics Competition and FIRST LEGO League at [www.usfirst.org](http://www.usfirst.org), as well as more about Robotics Education at [www.robotics.nasa.gov](http://www.robotics.nasa.gov) and [www.HoustonRobotics.org](http://www.HoustonRobotics.org).



High Voltage, Team 231



The Robodogs, Team 446

## Welcome New Members to Houston Section of AIAA

*By Sophia Bright, Vice-Chair of Operations*

On behalf of the Houston Section of AIAA, I would like to recognize and welcome several new and long-standing members to the Houston Section Professional Membership.

Ms. Lynne Barends	Mr. William Mitchell
Dr. Ravinder Chona	Ms. Sarah Shull
Mr. Javier Fuentealba	Mr. William Vantine
Mrs. Ellen Gillespie	Ms. Powtawche Williams
Ms. Darcey Kuhn	Mr. Bill Wood
Mr. Zakaria Mahmud	

Welcome again to the Houston Section! The Houston Section currently has 924 members consisting of 688 professional members, 109 National Educator Associates, and 127 student members. Our size and diverse membership allows the Houston Section to potentially explore various opportunities for events and activities. We have several technical committees to satisfy your technical interests as well as several section sponsored social activities throughout the year.

If any of you would like to find out more about the organization please feel free to visit the section website at <http://jsc.nasa.gov/aiaa/>. Additionally there are a number of activities that we sponsor throughout the year and we encourage the participation of all of our members not only from the aspect of attending the activity, but also in planning and coordinating the activity.

If you have any ideas for activities or services you would like to see from this section please feel free to

pass that information on to us. If you have specific Membership questions please feel free to the section Membership Chair. We are currently transitioning our Membership Chair position so you may either contact me, Sophia Bright, at 281-461-9300, Ext 234, or you can contact our section Membership Chair, Henry Schmidt at 281-244-4629. If you prefer to contact us by e-mail our addresses are [sbrightAIAA@tietronix.com](mailto:sbrightAIAA@tietronix.com) and [henry.j.SchmidtAIAA@boeing.com](mailto:henry.j.SchmidtAIAA@boeing.com), (Remove AIAA from e-mail address) respectively.

If you have specific questions regarding activities and other services please direct your questions to either myself or other members of the Executive Council.

## Some upcoming events for AIAA - Houston Section

*By Sophia Bright, Vice-Chair of Operations*

We have had a lot of things going on this spring and we are starting to draw near the end of the year for the 2002/2003 Executive Council. We still have a few events to round out the months of May and June:

- Dinner meeting with Dr. Dwayne Day, May 13th
- Lunch & learns coordinated by our Technical Committees
- Annual Houston Section Banquet with Dr. Jack Bacon, June 19th

We realize that we could have been better at getting the word out for some of the dinner meetings and events that we held this year. We hope that will improve in the upcoming year and that we will return to a more regular schedule for getting our newsletters and announcements out to the membership.

We have also started thinking about what kinds of activities and events we would like to have during the 2003/2004 term, and we would love to hear what ideas you may have in mind. If you do have some ideas please contact me at 281-461-9300, Ext 234 or at [sbrightAIAA@tietronix.com](mailto:sbrightAIAA@tietronix.com). (Remove AIAA from e-mail address)

## Calendar of Events

### May 2003

1	Space Day
13	Dinner Meeting
22	Rotary National Award for Space Achievement Banquet (South Shore Harbour)

**June 2003**

19 Awards Banquet

**July 2003**

1 AIAA Houston Section 2003/2004  
Term Begins

17-20 Dayton (Ohio) Airshow

25 25th Annual Lunar Rendezvous  
Space Run (Space Center Houston)

**August 2003**

Ballunar Festival (JSC)

**November 2003**

TBD Houston section 40<sup>th</sup> Anniversary  
Reunion

**October 2003**

AIAA Houston Section Glider Work-  
shop

Safety & Total Health Day (JSC )

18-19 Wings over Houston (Ellington  
Field)

**December 2003**

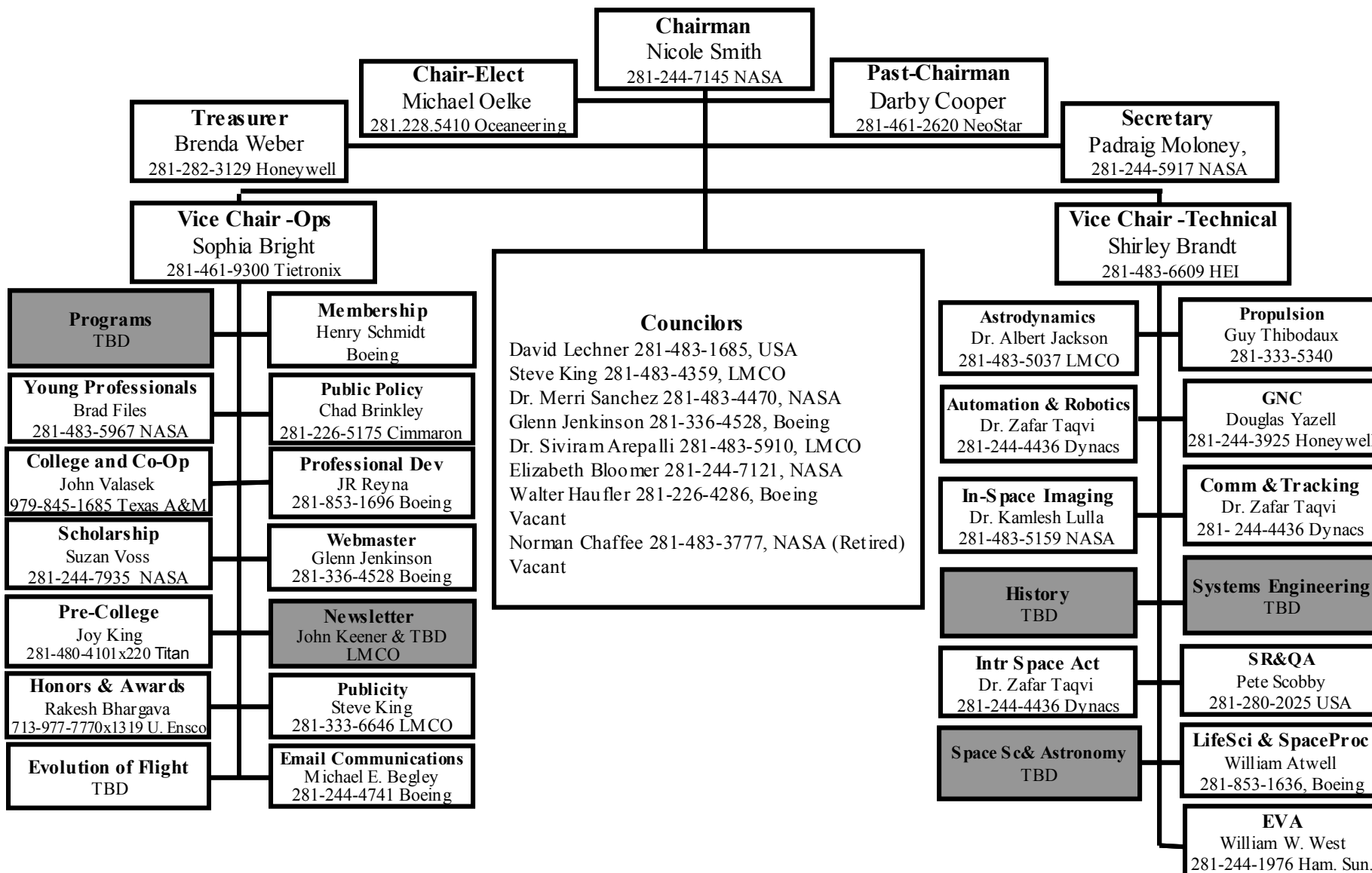
17 Wright Brothers Centennial of Flight  
Anniversary



# Houston Section Executive Council for 2002-2003

## Org Chart

as of 17 April 2003





**Houston Section**

P.O. Box 57524  
Webster, TX 77598

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**April 2003**

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